WHAT IS CLAIMED IS:

1.   A device for use with a detachably mountable camera for creating a digital mask
of a scene for discriminating between an object and a background, said camera having
a lens with an iris and principal axis, said iris having an iris diameter, said device
comprising:

a beam-splitter; and

a light source;

wherein said beam-splitter is planar and deployed so that when said camera is
mounted in said device said principal axis passes through said beam-splitter, wherein
said principal axis makes a principal angle with said beam-splitter, and so that a light
beam from said light source is incident on said beam-splitter in a direction making an
angle of 90° with said principal axis.

2.   The device described in **Claim 1** wherein said principal angle is substantially
45°.

3.   The device described in **Claim 2** wherein a light-source aperture is deployed
between said light source and said beam splitter so that said light beam has a light-
beam diameter when it strikes said beam-splitter, wherein said aperture has an
aperture diameter.

4.   The device described in **Claim 3** also providing a means to move said light
source in any of three mutually perpendicular directions with respect to said beam-
splitter as part of a light source alignment.

5.   The device described in **Claim 4** further comprising:

a reflection box; and

a light trap;

wherein said reflection box has a front face and a rear face, said front face
having a front upper edge and a front lower edge and said rear face having a rear

6   upper edge and a rear lower edge, wherein said beam-splitter is mounted in said

7   reflection box so as to extend substantially between said front upper edge and said rear

8   lower edge,

9   wherein said light trap is a substantially planar, rigid element, have a front trap

10 edge, a rear trap edge, and two trap side edges, wherein said front trap edge is affixed

11 to said front upper edge, and said rear trap edge is raised above said rear upper edge.

1   **6.**   The device described in **Claim 5**, wherein said reflection box has a mounting

2   ring on said rear face, said mounting ring being adaptable to said lens for attaching

3   said camera to said device.

1   **7.**   The device described in **Claim 6**, wherein said light source is at the end of a

2   fiber optics cable running from an external light generator to a point internal to said

3   apparatus, beneath said beam splitter.

1   **8.**   The device described in **Claim 7** also containing an internal light generator

2   energizable through an electric cable connected to said device.

1   **9.**   The device described in **Claim 7**, wherein said light source is a strobe light

2   triggerable in synchrony with a shutter release on said camera.

1   **10.**   The device descried in **Claim 6**, wherein said mutually perpendicular directions

2   are along an X-axis, a Y-axis, and a Z-axis, respectively, said Z-axis being parallel to

3   said direction of said light beam and said X-axis being parallel to said principal axis.

1   **11.**   The device described in **Claim 10**, wherein said light source when energized

2   causes a virtual light source to appear at said beam-splitter.

1   **12.**   The device described in **Claim 11**, wherein movement of said light source

2   parallel to said X-axis and to said Y-axis can cause said virtual light source to become

3   coaxial with said iris.

13. The device described in **Claim 12**, wherein movement of said light source parallel to Z-axis can cause said virtual light source to take on a virtual diameter no greater than said iris diameter.

14. Apparatus for creating a digital mask of an object for discriminating, in a digital photograph, between said object and a background of said object, said apparatus comprising:

   a digital camera;

   a device according to **Claim 1**;

   a support for said object; and

   a sweep;

   wherein said apparatus is mounted on said camera, wherein said support for said object is a substantially horizontal, transparent surface and said object is placed on said surface, wherein said sweep is arranged substantially vertically behind said object and extends below said horizontal glass surface of said support.

15. The apparatus of **Claim 14**, wherein said sweep is a retro-reflective sheet covered with transparent spheres.

16. The apparatus of **Claim 15**, wherein said spheres are glass spheres.

17. A method for producing a photograph of an object where said photograph contains only the object, said method comprising the steps of:

   a.   providing a retro-reflective sweep behind said object;

   b.   supporting said object on a transparent surface;

   c.   taking a mask exposure, wherein said object and said sweep are illuminated by a light source during said mask exposure so that a sharp brightness contrast is obtained between said object and said sweep;

   d.   using said sharp brightness contrast to define a background mask

9   e.   using said background mask to strip said background from said photograph.

1   **18.**   The method according to **Claim 17**, wherein said light source is a strobe light

2   synchronized with a shutter release mechanism of said camera.

1   **19.**   The method according to **Claim 17**, wherein said light source is constantly

2   energized.

1   **20.**   The method according to **Claim 17** wherein said light source generates light of

2   providing light of a particular color.